

What is claimed is:

1. A computer-readable medium having stored thereon a data structure comprising:

5 information identifying a secret share of a finite set of secret shares; and
a secret share profile associated with the secret share and comprising a set of activities associated with the secret share, the set of activities corresponding to at least one activity conducted within a commerce system by at least a portion of a plurality of entities within the commerce system.

10 2. A computer-readable medium having stored thereon a data structure comprising:

an estimated activities list corresponding to an entity of a plurality of entities within a commerce system and comprising common activities that are found within
15 each of a plurality of profiles, wherein the plurality of profiles uniquely correspond to a plurality of secret shares that collectively define an entity identification of the entity, and wherein each of the plurality of profiles comprises a set of activities conducted in the commerce system by at least a portion of the plurality of entities.

20 3. For a commerce system comprising a plurality of entities each having an associated entity identity that is stored as a plurality of secret shares amongst at least a portion of a plurality of shareholders, wherein each plurality of secret shares comprises a subset of a finite set of secret share values, a method for estimating activities of a first entity of the plurality of entities, the method comprising:

25 associating, for each entity of the plurality of entities, at least one activity conducted by the entity within the commerce system with each of the plurality of secret shares used to store the entity identity corresponding to the entity such that each secret share of the finite set of secret share values has associated therewith a set of activities from at least a portion of the plurality of entities; and

30 generating, for the first entity, an estimated activities list comprising an intersection of sets of activities associated with each secret share of a first plurality of secret shares used to store a first entity identity corresponding to the first entity.

4. The method of claim 3, further comprising:
generating a set of recommendations based on the estimated activities list; and
providing the set of recommendations to the first entity.

5. The method of claim 3, wherein associating the at least one activity with each of the plurality of secret shares further comprises adding the at least one activity to a plurality of profiles uniquely corresponding to the first plurality of secret shares, wherein each shareholder of a first portion of the plurality of shareholders that stores one of the first plurality of secret shares also maintains one of the plurality of profiles.

6. The method of claim 5, wherein generating the estimated activities list further comprises:

retrieving, by an anonymity service provider in communication with the first entity and each of the first portion of the plurality of shareholders, the plurality of profiles from the first portion of the plurality of shareholders; and

calculating, by the anonymity service provider, the intersection by determining common activities that are found within each of the plurality of profiles.

7. The method of claim 3, wherein the at least one activity includes purchase of at least one digital product.

8. An apparatus for use in a commerce system comprising a plurality of entities each having an associated entity identity that is stored as a plurality of secret shares amongst at least a portion of a plurality of shareholders, wherein each plurality of secret shares comprises a subset of a finite set of secret share values, the apparatus comprising:

means for associating, for each entity of the plurality of entities, at least one activity conducted by the entity within the commerce system with each of the plurality of secret shares used to store the entity identity corresponding to the entity such that each secret share of the finite set of secret share values has associated therewith a set of activities from at least a portion of the plurality of entities;

means for receiving sets of activities associated with each secret share of a first plurality of secret shares used to store a first entity identity corresponding to a first entity; and

means, coupled to the means for receiving, for generating an estimated activities list, for the first entity, comprising an intersection of the sets of activities.

9. The apparatus of claim 8, further comprising:

means for generating a set of recommendations based on the estimated activities list; and

means, coupled to the means for generating the set of recommendations, for providing the set of recommendations to the first entity.

10. The apparatus of claim 8, wherein the means for associating the at least one activity with each of the plurality of secret shares further comprises:

means for adding the at least one activity to a plurality of profiles uniquely corresponding to a first plurality of secret shares, wherein each shareholder of a first portion of the plurality of shareholders that stores one of the first plurality of secret shares also maintains one of the plurality of profiles.

11. The apparatus of claim 10, wherein the means for receiving further operate to receive the plurality of profiles from the first portion of the plurality of shareholders, and wherein the means for generating the estimated activities list further comprises:

means for calculating the intersection by determining common activities that are found within each of the plurality of profiles.